# **QCR Assignment # 03**

**ABUBAKAR NUM-BSCS-2022-41**

## CODE

import pandas as pd  
import seaborn as sns  
import matplotlib.pyplot as plt  
  
# read the data file  
file = pd.read\_excel("C:/Users/Developer/Desktop/QCR Project/student-mat.xlsx")  
# extract the data for grade and study time and create a DataFrame  
Grade = file["G3"].tolist()  
study\_t = file["studytime"].tolist()  
data\_set = pd.DataFrame({"Grade": Grade, "Study Time": study\_t})  
# group the data by grade and study time and count the occurrences  
data\_set = data\_set.groupby(["Grade", "Study Time"]).size().reset\_index(name="Count")  
# reshape the data to create a pivot table  
data\_set = data\_set.pivot("Grade", "Study Time", "Count")  
# plot the heatmap  
sns.heatmap(data\_set, annot=True, fmt="g", cmap="YlGnBu")  
plt.title("Relationship between Final Grade and Weekly Study Time")  
plt.show()

## TASK 03OUTPUT